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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,042	10/29/2003	Gregory Steinthal	041358-0285	1202

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EXAMINER	
LE, TOAN M	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/698,042	STEINTHAL ET AL.	
	Examiner	Art Unit	
	Toan M. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,11-13,16,19-22,25-29,32 and 33* is/are rejected.

7)☒ Claim(s) *5-10,14,15,17,18,23,24,30 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 June 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/10/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 11-13, 16, 19-22, 25-29, and 32-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewis et al. (U.S. Patent No. 6,759,010).

Referring to claim 1, Lewis et al. disclose a biological agent detection apparatus, comprising:

a substrate (col. 40, lines 61-62; col. 41, lines 61-67; col. 42, lines 1-6);

an array of two or more sensors arranged on the substrate, wherein at least a first one of the sensors includes a sensing element configured to detect a biological agent (col. 40, lines 61-62; col. 41, lines 61-67; col. 42, lines 1-6); and

a processing module directly coupled to each of the sensors and configured to process signals received from the two or more sensors to produce an output signal (col. 23, lines 22-25; col. 40, line 65; col. 41, lines 12-14).

As to claim 2, Lewis et al. disclose a biological agent detection apparatus, wherein the processor is configured to execute a first process that detects a change in an environmental

condition, and a second process that identifies an origin of the change in the environmental condition (col. 4, lines 47-50; col. 41, lines 12-14).

Referring to claim 3, Lewis et al. disclose a biological agent detection apparatus, wherein the second process includes a pattern recognition algorithm (col. 27, lines 2-6).

As to claim 4, Lewis et al. disclose a biological agent detection apparatus, further including a communication module configured to provide the output signal to an external intelligence device (col. 26, lines 54-58; col. 27, lines 43-47).

Referring to claim 11, Lewis et al. disclose a biological agent detection apparatus, wherein at least two of the sensors are polymer composite sensors (col. 41, lines 35-41).

As to claim 12, Lewis et al. disclose a biological agent detection apparatus, wherein at least a second one of the sensors is a chemical sensor (col. 4, lines 47-50; col. 29, line 67; col. 30, lines 1-15).

Referring to claim 13, Lewis et al. disclose a biological agent detection apparatus, wherein the sensing element of the first sensor is selected from the group consisting of a polymer composite sensor, a surface modified carbon black sensor, a sol-gel encapsulated enzyme, a biopolymer, a self assembling monolayer, an intrinsically conducting polymer, a carbon nanotube composite, a nanogold composite and a nanoscale polymer composite (col. 12, lines 16-34; col. 41, lines 35-41 and lines 52-53).

As to claim 16, Lewis et al. disclose a biological agent detection apparatus, wherein the sensors and the processing module are integrated on the substrate (col. 23, lines 16-25).

Referring to claim 19, Lewis et al. disclose a biological agent detection apparatus, wherein the sensing element of the first sensor is an intrinsically conducting polymer selected from the group consisting of polyaniline and polythiophene (col. 41, lines 35-41).

As to claim 20, Lewis et al. disclose a biological agent detection apparatus, wherein the apparatus is used to diagnose a disease or determine a biological agent based on sampling the atmosphere or a bodily fluid (col. 27, line 67; col. 28, lines 1-11) .

Referring to claim 21, Lewis et al. disclose a biological agent detection apparatus, wherein a second one of the sensors includes a sensing element configured to detect a biological element different from the biological agent detectable by the first sensor (col. 4, lines 47-50; col. 41, lines 12-14).

As to claim 22, Lewis et al. disclose a biological agent detection apparatus, further comprising a communication module configured to communicate with an external processor (col. 26, lines 54-58; col. 27, lines 43-47).

Claims 5-10, 14-15, 17-18, and 23-24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance of the claims is the inclusion of a wireless interface comprising RF and IR transmitter and transceiver; a physical bus interface comprising an RS-232 port, a USB port, and a Firewire port; and a power module supplied by a pick-up antenna to provide information to a user in response to the response value at or above a threshold value via speaker, buzz, or vibration mechanism, wherein the dimension of the integrated apparatus is of less than about 1 square inch so that allows a user to wear the apparatus.

Referring to claim 25, Lewis et al. disclose a sensor system, comprising:

a plurality of sensing devices, each device including an array of two or more sensors arranged on a substrate (col. 40, lines 61-62; col. 41, lines 61-67; col. 42, lines 1-6) and a wireless communication module for remote communication (col. 27, lines 43-47); and

a central processing node, located remote from said sensing devices, including a processing module and a communication module, said node being configured to receive and process signals from the plurality of sensing devices (col. 27, lines 43-47; figure 1C).

As to claim 26, Lewis et al. disclose a sensor system, wherein at least a first one of said sensing devices includes a polymer composite sensor (col. 41, lines 35-41).

Referring to claim 27, Lewis et al. disclose a sensor system, wherein each of said sensing devices includes a polymer composite sensor (col. 41, lines 35-41).

As to claim 28, Lewis et al. disclose a sensor system, wherein at least a first one of said sensing devices includes a sensor configured to detect a biologic agent (col. 4, lines 47-50; col. 27, lines 64-67; col. 28, lines 1-11).

Referring to claim 29, Lewis et al. disclose a sensor system, wherein at least a first one of said sensing devices includes a sensor configured to detect a chemical agent (col. 4, lines 47-50; col. 29, line 67; col. 30, lines 1-15).

As to claim 32, Lewis et al. disclose a sensor system, wherein at least a first sensing device is selected from the group consisting of a polymer composite sensor, a surface modified carbon black sensor, a sol-gel encapsulated enzyme, a biopolymer, a self assembling monolayer, an intrinsically conducting polymer, a carbon nanotube composite, a nanogold composite and a nanoscale polymer composite (col. 41, lines 35-41 and lines 52-53).

Referring to claim 33, Lewis et al. disclose a sensor system, wherein at least a first sensing device includes an intrinsically conducting polymer selected from the group consisting of polyaniline and polythiophene (col. 41, lines 35-41).

Claims 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance of the claims is the inclusion of a power source comprising a battery, a solar cell, an RF/IR tag module and an RF/IR transceiver for sending/receiving a corresponding RF/IR activating signal to/from sensing device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toan Le

March 16, 2005

BRYAN BUI
PRIMARY EXAMINER